

**IN THE CLAIMS:**

Please amend Claims 3, 4, 9, 10 as indicated hereinbelow.

Please cancel Claim 18 as indicated hereinbelow.

**AMENDED CLAIMS:**

1. (previously amended) A method for implementing a database, comprising the steps of:
  - (a) providing at least one set of linked entities in the database, wherein the at least one set of linked entities contains a plurality of entities and each said entity in the said plurality of entities is arranged to store at least one data value;
  - (b) providing an additional entity in the said database for said at least one set of linked entities; and
  - (c) storing in the additional entity the aggregation of a plurality of data values contained in the said at least one set of linked entities, whereby the aggregated data values are obtained by performing a read operation on the additional entity.
2. (previously amended) A method for modifying a database having at least one set of linked entities, wherein the at least one set of linked entities contains a plurality of entities and each said entity in the plurality of entities is arranged to store at least one data value, the method comprising the steps of:
  - (a) providing an additional entity in the database for the said at least one set of linked entities; and
  - (b) storing in the said additional entity the aggregation of a plurality of data values contained in the said at least one set of linked entities, whereby the aggregated data values are obtained by performing a read operation on the additional entity.

3. (currently amended) A method for reading from a database, ~~the database~~ comprising[[:]] the steps of:
- (a) providing at least one set of linked entities, wherein the said at least one set of linked entities contains a plurality of entities and each said entity in the said plurality of entities is arranged to store at least one data value; and
  - (b) providing an additional entity in the said database for the said at least one set of linked entities, the said additional entity comprising the aggregation of a plurality of data values stored in the said at least one set of linked entities;
  - (c) performing a single read operation on the said additional entity, whereby the plurality of data values contained within the said at least one set of linked entities are obtained.
4. (currently amended) A method in accordance with Claim 3, comprising the initial steps of:
- (d) determining the initial read/write ratio of the said database[[:]];
  - (e) comparing said initial read/write ratio of said database to a critical read/write ratio; and
  - (f) if said initial read/write ratio is greater than said critical read/write ratio, then performing the method steps (a), (b), (c) of Claim 1.

5. (previously amended) A method in accordance with Claim 4, wherein step (d) includes the steps of:

- (d1) providing data with regard to the time taken to perform a read operation and a write operation on a first implementation of the said database;
- (d2) providing data with regard to the time taken to perform a read operation and a write operation on a second implementation of the said database;
- (d3) calculating a read time difference between the time taken to perform a read operation on said first implementation of said database and on said second implementation of database;
- (d4) calculating a write time difference between the time taken to perform a write operation on said first implementation of said database and on said second implementation of said database; and
- (d5) calculating the ratio between the read time difference and the write time difference to determine the read/write ratio for the said database.

6. (previously amended) A system for reading from a database, comprising:

- (a) a database means arranged to contain at least one set of linked entities, wherein said at least one set of linked entities contains a plurality of entities and each said entity is arranged to store at least one data value;
- (b) means for providing an additional entity for the said at least one set of linked entities, the said additional entity comprising the aggregation of a

plurality of data values stored in the said at least one set of linked entities; and

- (c) reading means arranged to read the said plurality of data values contained within the said at least one set of linked entities by performing a read operation on the said additional entity.

7. (previously amended) A system for implementing a database, comprising:

- (a) means for providing at least one set of linked entities in the said database, wherein the said at least one set of linked entities contains a plurality of entities and each said entity in the said plurality of entities is arranged to store at least one data value;
- (b) means for providing an additional entity for the said at least one set of linked entities; and
- (c) storing means arranged to store, in the said additional entity, the aggregation of a plurality of data values contained in the said at least one set of linked entities;
- (d) reading means enabled to read said aggregation of a plurality of data values by performing a read operation on the said additional entity.

8. (previously amended) A system for modifying a database having at least one set of linked entities, wherein the at least one set of linked entities contains a plurality of entities and each said entity in the said plurality of entities is arranged to store at least one data value, comprising:

- (a) means for providing an additional entity in the said

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database for said at least one set of linked entities;

- (b) storing means arranged to store, in the said additional entity, the aggregation of a plurality of data values contained in the said at least one set of linked entities;
- (c) a reading means which can be enabled to read the aggregated data values by performing a read operation on the said additional entity.

9. (currently amended) A method for increasing database performance and determining [[a]] an initial read/write ratio for a database, said database having at least one set of linked entities wherein one set of linked entities contains a plurality of entities and each said entity is arranged to store at least one data value, comprising the steps of:

- (a) providing data with regard to the time taken to perform a read operation and a write operation on a first implementation of said database;
- (b) providing data with regard to the time taken to perform a read operation and a write operation on a second implementation of said database;
- (c) calculating a read time difference between the time taken to perform a read operation on a first implementation of a database and on a second implementation of said database;
- (d) calculating a write time difference between the time taken to perform a write operation on a first implementation of said database and on a second implementation of said database; and
- (e) calculating the ratio between the read time

difference and the write time difference to determine the said initial read/write ratio for said database;

(f) establishing a critical read/write ratio (CRW) which provides the ratio of the average number of reads from the entity that are needed for each write to the entity; and

(g) utilizing said critical read/write ratio to increase performance in said database, when said initial read/write ratio is greater than said critical read/write ratio.

10. (currently amended) A method in accordance with Claim 9, wherein ~~[[the]]~~ said first implementation of said database utilizes at least one set of linked entities.

11. (previously amended) A method in accordance with Claim 9, wherein said second implementation of said database utilizes an aggregation of all data values stored in the said at least one set of linked entities.

12. (previously amended) A computer program arranged, when loaded on a computing system, to implement the method of Claim 1.

13. (previously amended) A computer readable medium providing a computer program in accordance with the method of Claim 9.

14. (previously presented) A computer program arranged, when loaded on a computing system, to implement the method of Claim 2.

15. (previously presented) A computer readable medium providing

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a computer program in accordance with Claim 7.

16. (previously presented) A computer readable medium providing a computer program in accordance with Claim 3.
17. (previously presented) A computer readable medium providing a computer program in accordance with Claim 5.
18. (cancelled)